

PATENT

Atty. Dkt. No. AMAT/5090/FET/FET/JB1

REMARKS

This is intended as a full and complete response to the Final Office Action dated February 28, 2005, having a shortened statutory period for response set to expire on May 28, 2005. Claims 1, 6, 10, 12-13, 16 and 19-20 have been amended to clarify the invention. New claims 31-33 have been added to more clearly recite aspects of the invention. Applicants believe no new matter has been introduced by the amendments and the new claims presented herein. The amendments have been made in a good faith effort to advance prosecution on the merits. Claims 5, 18 and 27 have been cancelled without prejudice. Applicants reserve the right to subsequently take up prosecution of the claims as originally filed in this application in a continuation, a continuation-in-part and/or a divisional application. Please reconsider the claims pending in the application for reasons discussed below.

Examiner M. Haney has left the USPTO. The above referenced application is now being examined by examiner D. Czekaj. In a telephone interview on April 29, 2005, examiner D. Czekaj indicated that claims 31-33 appear to be allowable subject, however, to further review and an updated search. Claim 31 is original claim 5 rewritten in independent form. Claim 32 is original claim 18 rewritten in independent form. Claim 33 is previously presented claim 27 rewritten in independent form. Applicants appreciate the examiner's courtesy for scheduling and conducting the interview.

Claims 1-12, 17 and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,360,005 B1 (*Aloni*). The examiner takes the position that the reference to irregular velocity and stepping errors in *Aloni* allow for imaging of substrates as they move in a non-linear motion. See col. 11, lines 5-10. Applicants respectfully traverse this rejection.

Aloni's inspection system involves two or more stages, whereby an object is examined separately for fine defects by inspecting a binary level representation of the object and for ultra fine defects by inspecting a gray level representation of the object. See col. 2, lines 38-42. The system further includes an automatic registration subsystem having a misalignment detection memory. The automatic registration subsystem is operative to correct for continuous misregistration phenomena, such as,

Page 9

357018_2

PATENT

Atty. Dkt. No. AMAT/5090/FET/FET/JB1

irregular velocity of the scanner, system vibrations, thermal drift and misregistration due to discontinuities in the inspected channel, such as stepping errors or sparse geometries. See col. 11, lines 1-10. However, *Aloni* does not teach or disclose determining trigger intervals for at least two trigger signals for the acquisition of at least two images on a substrate surface moving with non-linear motion, wherein a first trigger interval corresponds to a first image position and a second trigger interval corresponds to a second image position, as recited in claims 1 and 10; or determining an integration interval for a second sensor of the time-domain camera corresponding to the non-linear movement of the substrate surface, as recited in claim 20. Rather, *Aloni* merely proposes an automatic registration subsystem that corrects for continuous misregistration phenomena, such as irregular velocity of the scanner. The reference to irregular velocity in *Aloni* refers to the scanner, and not to the movement of substrates. Accordingly, claims 1, 10 and 20 are patentable over *Aloni*. Claims 2-4, 6-9, 11-12 and 17 are also patentable over *Aloni* since they depend from claims 1 and 10 respectively.

Claims 13-16, 18-19 and 21-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Aloni* in view of U.S. Patent No. 6,388,414 B1 (*Kobayashi*). With respect to claims 13-15, the examiner concedes that *Aloni* does not teach determining trigger intervals by measuring the rotation of a motor. With respect to claim 16, the examiner concedes that *Aloni* does not teach trigger intervals that are equal to the number of steps and determining the image positions by measuring the first number of steps of the stepper motor for the first trigger interval and measuring the second number of steps of the stepper motor for the second trigger interval. With respect to claims 18-19 and 23-24, the examiner concedes that *Aloni* does not teach or disclose providing the step time for each step of a stepper motor and determining the number of steps for the first image position and the number of steps for the second image position and summing the step time for each step of the stepper motor for the first image position and summing the step time for each step for the second image. With respect to claims 25 and 26, the examiner concedes that *Aloni* does not teach or disclose determining the interval corresponding to the at least one image position by measuring the rotation of a motor, wherein the rotation time to achieve the rotation angle defines the interval. With respect to claims 20-21 and 27-30, the examiner concedes that *Aloni*

Page 10

357018_2

PATENT

Atty. Dkt. No. AMAT/5090/FET/FET/JB1

does not teach or disclose determining the integration interval by determining the number of stepper steps from the start trigger point or first sensor to the second sensor. The examiner attempts to supplement all of the above referenced missing limitations with *Kobayashi*. Applicants respectfully traverse these rejections.

As mentioned above, *Aloni* does not teach or disclose determining trigger intervals for at least two trigger signals for the acquisition of at least two images on a substrate surface moving with non-linear motion, wherein a first trigger interval corresponds to a first image position and a second trigger interval corresponds to a second image position, as recited in claim 10. *Aloni* also does not teach or disclose determining an integration interval for a second sensor of the time-domain camera corresponding to the non-linear movement of the substrate surface, as recited in claim 20.

Kobayashi generally describes a step motor driving apparatus. However, *Kobayashi* does not teach or disclose determining trigger intervals for at least two trigger signals for the acquisition of at least two images on a substrate surface moving with non-linear motion, wherein a first trigger interval corresponds to a first image position and a second trigger interval corresponds to a second image position, as recited in claim 10. *Kobayashi* also does not teach or disclose determining an integration interval for a second sensor of the time-domain camera corresponding to the non-linear movement of the substrate surface, as recited in claim 20.

Thus, neither *Aloni* nor *Kobayashi*, alone or in combination, teaches or discloses determining trigger intervals for at least two trigger signals for the acquisition of at least two images on a substrate surface moving with non-linear motion, wherein a first trigger interval corresponds to a first image position and a second trigger interval corresponds to a second image position, as recited in claim 10; and determining an integration interval for a second sensor of the time-domain camera corresponding to the non-linear movement of the substrate surface, as recited in claim 20. Furthermore, there is no suggestion discerned in *Aloni* or *Kobayashi* of modifying the devices or methods disclosed therein in the direction of the present invention, nor does there appear to be any suggestion of the desirability of such modifications. The mere fact that references, such as *Aloni* and *Kobayashi*, can be combined or modified does not render the

Page 11

357018_2

PATENT

Atty. Dkt. No. AMAT/5090/FET/FET/JB1

resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP 2143.01. The absence of such a suggestion to combine the references is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579 (Fed. Cir. 1997). Since claims 13-16, 18-19 and 21-30 depend from claims 1 and 20, respectively and since neither *Aloni* nor *Kobayashi*, alone or in combination, teaches, discloses or suggests all the limitations of claims 10 and 20, claims 13-16, 18-19 and 21-30 are therefore also patentable *Aloni* and *Kobayashi*.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the claimed invention. Having addressed all issues set out in the final office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the final office action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this final office action. Accordingly, allowance of the claims is respectfully requested.

Respectfully submitted,



Ari Pramudji

Registration No. 45,022

MOSE, PATTERSON & SHERIDAN, L.L.P.

3040 Post Oak Blvd., Suite 1500

Houston, TX 77056

Telephone: (713) 623-4844

Facsimile: (713) 623-4846

Attorney for Applicants